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Toddlers Master Everyday Activities in Kindergarten: A Gender Perspective

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Abstract This article discusses how 2-year olds cope with various everyday activities as observed by kindergarten staff from a gender perspective. Everyday activities are part of the daily pedagogical life in a kindergarten and are linked to situations such as meals, dressing and undressing, grooming and potty/toilet training. Data were collected through structured observation of 535 boys and 509 girls. The children, aged between 30 and 33 months, were observed over a 3-month period. The observation guideline material "Alle Med" ("Everyone Included") was used to assess how children master everyday activities. The result reveals gender differences favouring the girls. In the present article, this result will be analysed against a backdrop of gender-related theory.

Keywords Gender differences · Kindergartens · Everyday activities · Toddlers' development · Toddlers' mastery · Quantitative studies

Introduction

One of the characteristics of the Norwegian kindergarten tradition is a holistic approach whereby regular everyday activities are incorporated into the pedagogical work in kindergarten (Jensen 2009; Ministry of Education and Research 2011). Everyday activities are considered to be important for the children's development and learning, including social skills (Ministry of Education and Research 2011, 2013).

The kindergartens in Norway are for children aged 0–5 years and are integrated into the national educational system, the Ministry of Education and Research, which is responsible for primary and secondary schools, upper secondary and tertiary vocational education and higher education sectors, as well as kindergartens and cultural schools. The children in Norway start compulsory school when they are 6 years old (Ministry of Education and Research 2011). The Ministry of Education and Research established regulations, which provide a curriculum plan for the content and tasks of kindergarteners. The aim of the curriculum plan is to give teachers a binding framework for the planning, implementation and assessment of the activities of kindergartens. According to The National Curriculum for Kindergarten (Ministry of Education and Research 2011), social skills are gained through children's interaction with one other and with the kindergarten personnel.

In the research project "The Stavanger Project—The Learning Child," everyday activities constitute part of the observation area concerning emotional and social development. Pramling and Sheridan (1999) described everyday activities as routine situations. These daily activities contribute to the development and learning among children. For toddlers, this situation is a matter of cultivating independence and mastering commonplace activities, such as getting dressed on their own, eating food, washing hands, and going to the bathroom. In this article, everyday activities are understood in terms of Pramling and Sheridan's terminology and the National Curriculum (Ministry of Education and Research 2011).

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The focus of this article is based on what types of everyday activities girls and boys, between 30 and 33 months of age, are able to cope within a kindergarten setting, as observed by the kindergarten staff. The interaction between the toddlers and the kindergarten staff will not be analysed in this article.

Theoretical Background

A database search revealed that little research has been conducted with respect to the connections between gender and everyday activities in kindergartens. Research in other areas that may shed light on such a potential connection has been documented in several longitudinal studies in the fields of languages, motivation, mathematics and self-regulation (Friederici et al. 2008; Meece and Painter 2008; Silverman 2003; Zambrana et al. 2012). These studies demonstrated differences favouring girls. Research into children's language development has shown that newborn girls make better eye contact, are more able to discriminate, and pay greater attention to verbal stimuli (Friederici et al. 2008; Leeb and Rejskind 2004). Compared with boys, girls between 1 year 6 months and 3 years of age display a significantly higher level of language comprehension (Zambrana et al. 2012). Another Norwegian study on the subject of premature children documented how girls outperform boys in terms of social communication (Olafsen et al. 2006).

Several qualitative studies revealed a similar picture (Eidevald 2009; Johansson and Emilson 2010; Jonsdottir 2007; Månsson 2000, 2011). In these studies, observation and interviews with kindergarten personnel revealed that boys and girls are attributed different properties and hence different values. Girls are described as independent, compliant and capable, whereas boys are observed to be physically active but need affection and physical contact. During circle times and interactions with the teachers, boys receive attention and room to express themselves, whereas girls are trained in responsibility and independence. Expectations are described as being related to gender and individuals; they are in part subconscious, unreflected and ambivalent. Jonsdottir (2007) reported that kindergarten personnel perceive girls as more social, more communicative, more intellectual and more competent than boys. Gender is considered to be a social construction, and traditional perceptions of gender seem to be well entrenched in kindergarten (Eidevald 2009; Månsson 2000; Rossholt 2012; Walsh 2014).

Biological explanations and socialisation as well as social expectations have been shown to be significant with respect to gender differences in motor skills (Campbell and Eaton 1999; Copeland et al. 2012; Koda et al. 2004; Mondschein et al. 2000; Rossholt 2012; Walsh 2014). Research on infants has shown a small difference in motor skills favouring boys (Campbell and Eaton 1999). Campbell and Eaton claimed that the differences in motor skills are innate and biologically inherent. This factor influences the infants' behaviour and motor experience, whereas the differences in motor skills are amplified in socialisation processes. For example, there may be an inherent expectation and acceptance of boys being more physically active than girls, which consequently leads to better motor skills. In contrast, Moser and Reikerås (2014) found that girls at 33 months of age have a higher mastery of motor skills than boys. Motor skills are key to mastering everyday activities. By interacting with other children and kindergarten personnel, children are given the opportunity to develop motor skills, self-assertiveness and the ability to see things from the perspective of others (Ogden 2009). The difference between the motor skills of girls and boys may also indicate gender differences related to everyday activities.

Everyday activities concern many different areas of child development. There is insufficient research on the impact of gender during interactions between children and how gender is expressed during everyday activities. In the present study, we aimed to produce results that would fill this gap. Focusing on the gender aspect in kindergartens is consistent with white papers on Norwegian kindergartens. The National Curriculum for Kindergarten (Ministry of Education and Research 2011) stressed that kindergarten personnel must be aware of their own and society's attitudes towards the expectations of girls and boys. The Kindergarten Act §1 stated that personnel should promote equality in their work with children (Lovdata 2010). In the Action Plan for Gender Equality (Ministry of Children, Equality and Social Inclusion 2011), the interaction between children and adults is considered to be crucial in the development of children. This interaction involves learning how to master everyday activities in which the role of the personnel is crucial for the development of various skills.

Previous evaluations of kindergarten research have suggested the use of quantitative methods in kindergarten research, particularly for generalisable research on children under 3 years of age (Borg et al. 2008). We have considered using similar quantitative methods in our study.

Our research may provide insight into how toddlers, from a gender perspective, master everyday activities differently. This area has been little explored nationally and internationally. Therefore, we formulated the following research questions: What types of everyday activities are girls and boys able to cope with as observed by the kindergarten staff? Are there differences in how girls and boys, at 30 and 33 months of age, cope with everyday activities as observed by the kindergarten staff?

Method

This study constitutes part of a longitudinal, interdisciplinary project: "The Stavanger Project—The Learning Child." The project is conducted in cooperation with the National Centre for Reading Education and Research, the Reading Centre at the University of Stavanger and Stavanger Municipality. All of the municipal kindergartens, a large number of privately owned kindergartens and all of the schools in Stavanger municipality participated in the project. The project monitors children's development from the ages of 30 months to 10 years. The children's coping skills are recorded at four different time periods: twice when they are attending kindergarten and twice after entering primary school. During kindergarten, the children's linguistic, mathematical and motor skills, as well as social development, are observed. During primary school, the children's reading, writing and mathematical skills are assessed (for further details, see The Stavanger Project, Reikerås et al. 2012).

The present study involved 535 boys and 509 girls. The data were collected at the commencement of the project when the children were aged between 30 and 33 months. The kindergarten staff recorded information on how the toddlers mastered everyday activities.

Research Material

The observation guideline "Alle Med," designed for kindergarten children aged between 1 year and 6 years, was used to observe and record the children's behaviour.

The guideline consists of an instruction booklet that describes what should be observed and an observation scheme template (Løge et al. 2006a, b). One scheme is used per observed child to record the toddler's skills.

The observation scheme is designed as a circle containing five rings with observation items, as shown in Fig. 1. The items are of increasing difficulty; the easiest item appears closest to the centre and the most difficult item appears on the outer edge. The circle consists of 90 blank fields; there is one field for each observation, including the registrations that are recorded. The observation scheme contains six primary categories: everyday activities, socio-emotional development, well-being and satisfaction, the development of playing skills, sensory-motor development and language development. Each of these categories contains 15 observation items that serve as the basis for observation and registration.

In this project, the kindergarten staff were asked only to complete the fields representing the four outer levels, resulting in 12 observation items. These 12 observation items form the basis for the present study. The items we include in our survey are shown in Table 1.

In addition to the information booklet, a second booklet was developed that contained three examples and detailed descriptions of each of the observation items used in the project.

The "Alle Med" research material was designed based on theoretical knowledge regarding children's learning, development and practical experience obtained from kindergarten. The material has been repeatedly tested in kindergartens among several hundred children.

During testing, the observations were checked to ensure that they were consistent for the individual child when the child was observed by two different kindergarten teachers; this testing was conducted with 157 children. The Wilcoxon Signed Rank Test yielded a result of Z-1.365, Asymp sig.2 tailed .172. Calculation of Cronbach's alpha yielded a reliability score of .94, indicating good internal consistency (Løge in press). It was not possible to validate these data against other data because there are insufficient Norwegian data mapping the same fields as "Alle Med."

Procedure

The Data Protection Official for Research advised the implementation of the project. Participation was granted through the parents' voluntary and informed consent. The parents were free to withdraw their child from the project at any time. The criteria for participating in the study indicated that toddlers younger than 30 months of age should be enrolled in kindergartens that intended to participate in the project and that the toddlers had to be born between July 1, 2005 and December 31, 2007. In this study, we had access to the data on 1044 children. No exclusion criteria were defined.

To ensure that the kindergarten staff had a common understanding of the observational contents and procedure, the teachers and staff without teacher training received training before the data collection began.

The following procedures were used when collecting data: each child had to master the skill over time and at least two teachers independently observed the child demonstrating the skill, partly or completely, in at least two different situations, before the event could be recorded.

When the toddlers mastered the observation items, the blank field on the registration form had to be completely filled in, which indicated complete mastery. If the child demonstrated mastery in selected situations or with assistance from the staff, the blank field was shaded, indicating partial mastery. When there was little or no observed mastery, the field remained blank to indicate that mastery had not yet been observed. The kindergarten teacher was responsible for ensuring the quality of the observations of each item and each activity.

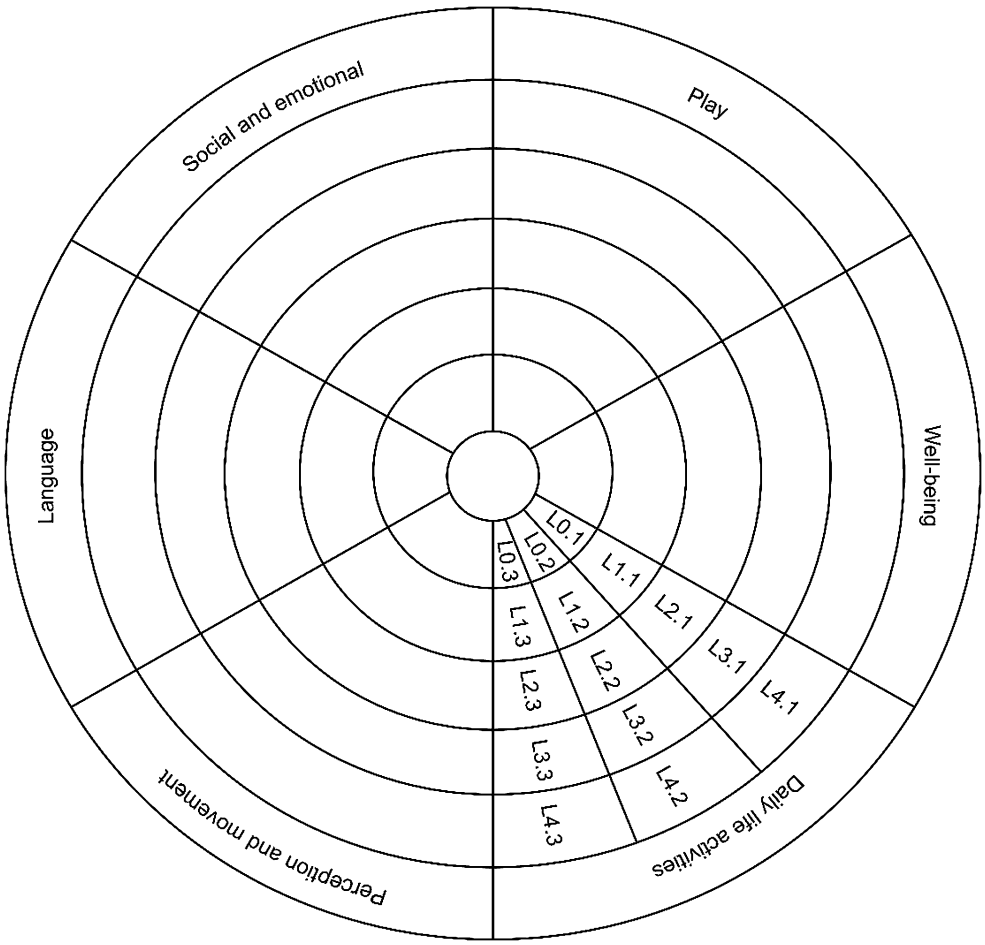

Fig. 1 Registration form for "Alle Med," which indicates the observation items used in the table

Table 1 Observation items of everyday activities in the "Alle Med" scheme

L1.1 Is cooperative in everyday activities
L1.2 Is starting to take an active part in preparing simple meals
L1.3 Begins to show interest in using the potty/loo
L2.1 Eats and drinks independently during meals
L2.2 Stays dry, gives notice when needing to go to the loo
L2.3 Participates in circle times/activities
L3.1 Can cope with going from one activity to another
L3.2 Has self-knowledge
L3.3 Dresses and undresses independently
L4.1 Accepts simple tasks of responsibility, e.g., helping the toddlers
L4.2 Copes with the kindergarten's routines
L4.3 Is able to be idle for brief periods without requiring the attention of adults

The staff, with whom the children were familiar, observed and recorded which skill each child had mastered. The observations were made in the children's natural environment during their regular activities. According to Bagnato et al. (2010), this method, which is termed authentic assessment, yields ecologically valid data because the information mirrors the children's functional behaviour. Norwegian kindergartens are characterised by a social-pedagogical tradition (Jensen 2009) that considers play and everyday activities of children to be more important than the formal teacher-controlled activities (Ministry of Education and Research 2011; Taguma et al. 2006). Our choice of method is consistent with this kindergarten tradition.

When the teachers performed their observations and data recording, the observation schemes were sent to the researchers. The data were transferred to a database for statistical processing. The observation schemes were returned to the kindergartens for additional use in planning and implementation of the pedagogical work and collaboration with the parents.

The observations were quantified as follows: If the child mastered a skill, it was assigned a value of 2; partial mastery of a skill was assigned a value of 1; and if a skill was not observed, a value of 0 was assigned. For everyday activities, the highest possible achievable sum was thus 24, when the child mastered all of the skills, with a sum of 6 for each of the various levels of the circle.

Results

The mean score for everyday activities at each level for girls and boys and the total sum for all of the participants are shown in Table 2.

Regarding the total score of all of the items, the Kolmogorov–Smirnov test of normality indicated a non-normal distribution. This observation is common for studies with a high number of participants, in which a graphical inspection often provides a better understanding (Pallant 2007). The normal Q–Q plot showed a relatively straight line with the exception of several poor results and several strong results. Comparing the mean score (8.6) with the trimmed mean (8.3), it appears that the results that are not on the line do not disturb the statistics in any particular way. We decided to retain all of the participants in the sample and thus assume a normal distribution, which allowed us to employ parametric statistics; however, the non-parametric analyses were also performed to ensure that they yielded similar results. We only reported the results of the parametric analyses in the present study.

An independent sample t test showed a significant difference ($p < .01$) between the total/sum score for everyday activities among girls ($M = 9.78$, $SD = 4.55$) and boys ($M = 7.37$, $SD = 3.55$). The gender effect for the total sum was Eta squared = .08 and may be considered a moderate effect (Cohen 1988). We found significant differences between the genders within each level [Eta squared: .08 (level 1); .04 (levels 2 and 3); .01(level 4)]. According to Leaper (2013), even the effects we registered at level 4 were meaningful in the context of gender differences.

To further investigate the observed gender differences in the sum and within each level, we proceeded to consider the results for each of the observation items, as described in Table 3. As we observed in Table 3, the girls have higher scores in all of the observed areas.

The multivariate analysis of variance (MANOVA) was used to analyse the differences between the girls and boys on the items (Table 3).

The MANOVA shows differences between the genders at the .05 significance level for all of the observation items. The gender effect varies in a range of .01–.08, which, according to Cohen (1988), is of small to medium impact. At a more stringent level of significance (=.01), the analyses showed differences between girls and boys for all of the items except L4.2, "copes with the kindergarten's routines." (Table 4).

Discussion

The aim of this study was to investigate likely gender differences with respect to what types of everyday activities girls and boys are able to cope with at the ages of 30–33 months, as observed by the kindergarten staff.

We noted that the difficulty of the observation items increased with each level (Table 2) and that there was substantial variation in the children's level of mastery (Table 2). Several children mastered activities at the highest level (L4) at 33 months of age. Additional analyses documented gender differences in favour of the girls; the girls scored significantly higher than the boys at all levels. This effect was greatest at level 1 and the smallest at level 4.

The girls also had higher mean scores than the boys on all of the observation items (Table 3). Additional analyses revealed that the gender differences were significant, favouring the girls, for all of the observation items. In both the entire sample and in separate examinations of girls and boys, there was unequal variance across observation items. The gender effect varied across the various observation items in areas that Cohen (1988) indicated as small effects ranging from .01 to .06 and medium effects ranging from .6 to .138. When researching gender differences, the effect sizes we found were regarded to be meaningful (Leaper 2013).

Table 2 Mean results on the different levels for girls and boys (mean and standardisation)

	Level 1	Level 2	Level 3	Level 4	Total
Girls (N = 509)	5.21 (1.12)	3.13 (2.15)	1.07 (1.83)	.37 (1.25)	9.78 (4.55)
Boys (N = 535)	4.49 (1.39)	2.29 (1.97)	.46 (1.15)	.14 (.70)	7.37 (3.55)
Total (N = 1044)	4.84 (1.31)	2.70 (2.10)	.76 (1.55)	.25 (1.01)	8.55 (4.24)

Table 3 Children's mean results of the different observation items for the entire sample (N = 1044) and divided into girls (N = 509) and boys (N = 535), a comparison of the variance (MANOVA) and the gender effect (Eta. squared)

			Mean	SD	F	Sig	Eta sq.
L1.1	Is cooperative in everyday activities	Girls	1.89	.34	27.36	.000	.026
		Boys	1.75	.49			
		Total	1.82	.43			
L1.2	Is starting to take an active part in preparing simple meals	Girls	1.81	.53	8.98	.003	.009
		Boys	1.70	.62			
		Total	1.75	.58			
L1.3	Begins to show interest in using the potty/loo	Girls	1.51	.77	84.96	.000	.076
		Boys	1.03	.90			
		Total	1.26	.87			
L2.1	Eats and drinks independently during meals	Girls	1.34	.88	19.50	.000	.018
		Boys	1.09	.95			
		Total	1.22	.92			
L2.2	Stays dry, gives notice when needing to go to the loo	Girls	.53	.82	60.86	.000	.055
		Boys	.20	.56			
		Total	.36	.72			
L2.3.	Participates in circle times/activities	Girls	1.26	.91	20.24	.000	.019
		Boys	1.00	.93			
		Total	1.12	.93			
L3.1	Can cope with going from one activity to another	Girls	.47	.80	28.29	.000	.026
		Boys	.24	.60			
		Total	.35	.71			
L3.2	Has self-knowledge	Girls	.28	.64	18.86	.000	.018
		Boys	.13	.43			
		Total	.21	.55			
L3.3	Dresses and undresses independently	Girls	.32	.62	55.68	.000	.051
		Boys	.09	.33			
		Total	.20	.51			
L4.1	Accepts simple tasks of responsibility, e.g., helping the toddlers	Girls	.14	.48	17.13	.000	.016
		Boys	.04	.24			
		Total	.09	.38			
L4.2	Copes with the kindergarten's routines	Girls	.11	.42	5.51	.019	.005
		Boys	.06	.30			
		Total	.08	.36			
L4.3	Is able to be idle for brief periods without requiring the attention of adults	Girls	.12	.44	10.57	.001	.010
		Boys	.05	.27			
		Total	.08	.37			

In this study, we presented data on both complete mastery and partial mastery. Our results showed that certain children are able to master everyday activities on their own, whereas others may achieve mastery with the assistance of others. This finding is consistent with the proximal development zone that describes the distance between the child's independent mastery and the potential the child is able to reach through guidance and support (Vygotsky and Cole 1978).

The results regarding the observation items for all of the participants revealed that at level 1, the percentage of children demonstrating complete mastery was larger than the percentage of those demonstrating partial mastery. This tendency continued at level 2, albeit not as strongly, which was consistent with the increasing difficulty of the levels. In level 3, there was greater variation for observation point L3.1 "can master going from one activity to another," for which the overall level of mastery was approximately twice

Table 4 Percentage distribution of skills mastery, partial skills mastery and no skills mastery for the various observation items for the entire sample (N = 1044) and for girls (N = 509) and boys (N = 535)

			Complete mastering skills	Partial mastering skills	No mastering skills
L1.1	Is cooperative in everyday activities	Girls	90.0	9.2	.8
		Boys	78.3	18.9	2.8
		Total	83.9	14.2	1.8
L1.2	Is starting to take an active part in preparing simple meals	Girls	87.0	6.9	6.1
		Boys	78.8	12.5	8.6
		Total	82.2	9.8	7.4
L1.3	Begins to show interest in using the potty/loo	Girls	67.8	15.3	16.9
		Boys	42.1	18.5	39.3
		Total	54.6	16.9	28.3
L2.1	Eats and drinks independently during meals	Girls	62.1	10.2	27.7
		Boys	49.7	9.9	40.4
		Total	55.8	10.0	34.2
L2.2	Stays dry, gives notice when needing to go to the loo	Girls	21.3	10.8	67.9
		Boys	7.5	5.0	87.5
		Total	14.2	7.8	77.9
L2.3	Participates in circle times/activities	Girls	57.2	11.2	31.6
		Boys	42.8	14.4	42.8
		Total	49.8	12.8	37.4
L3.1	Can cope with going from one activity to another	Girls	19.3	8.6	72.1
		Boys	8.6	6.5	84.9
		Total	13.8	7.6	78.7
L3.2	Has self-knowledge	Girls	10.2	7.9	81.9
		Boys	3.2	7.1	89.7
		Total	6.6	7.5	85.9
L3.3	Dresses and undresses independently	Girls	8.3	15.3	76.4
		Boys	1.5	5.8	92.7
		Total	4.8	10.4	84.8
L4.1	Accepts simple tasks of responsibility, e.g., helping the toddlers	Girls	5.5	2.9	91.6
		Boys	.9	2.2	96.8
		Total	3.2	2.6	94.3
L4.2	Copes with the kindergarten's routines	Girls	3.7	3.5	92.7
		Boys	1.7	2.2	96.1
		Total	2.7	2.9	94.4
L4.3	Is able to be idle for brief periods without requiring the attention of adults	Girls	4.5	2.9	92.5
		Boys	1.3	2.1	96.6
		Total	2.9	2.5	94.6

as large as it was for partial mastery, whereas, for the two other items, the share of children with partial mastery was greater than the share of those with complete mastery. At level 4, approximately equal numbers of toddlers displayed complete and partial mastery; however, the majority of the children displayed no mastery at this level. We observed the same tendency for both girls and boys.

Regarding observation point L1.3 "begin to show interest in using the potty/loo," approximately 70 % of the girls and 40 % of the boys demonstrated complete mastery and approximately 15 % of the girls and 20 % of the boys demonstrated partial mastery of this activity. The high coping score among girls for this observation point was consistent with the result of another longitudinal study of toddlers between the ages of 15 and 42 months, in which Schum et al. (2002) explained this difference by noting that girls matured earlier both physically and linguistically and that parents often initiated potty and toilet training earlier for

girls than for boys. The research by Schum et al. identified a connection between showing an interest in using the potty/loo and giving notice when the child needs to go to the loo. Our data indicated a similar tendency. Regarding "begin to show interest in using the potty/loo" (L1.3) and "giving notice if they need to go to the loo" (L2.2.), our data showed that the majority of the children failed to demonstrate the ability to give notice when they needed to use the loo; yet, 21 % of the girls and 8 % of the boys demonstrated partial mastery, whereas 11 % of the girls demonstrated complete mastery compared to 5 % of the boys.

In our study, we found that the gender effect was greatest for the observation items "begin to show interest in using the potty/loo" (L1.3) and "gives notice when they need to go to the loo" (L2.2.). The high level of coping skills demonstrated by the girls for these observation items may be influenced by both environmental factors (pedagogical methods, the expectations of parents and kindergarten teachers) and by physiological maturity (Schum et al. 2002). According to Hessen (2005), the biological differences between the genders cannot be excluded. He regarded the differences between the skills of girls and boys as a result of genetic dispositions that operate in concert with the external environmental factors. In the present study, the girls' advanced mastery may stem from the fact that they mature physically earlier than the boys, as Schum et al. (2002) had claimed. Hessen argued that the physiological aspect was difficult to separate from the environmental factors that influence children's development and that the physical and the psychological aspects are connected.

The girls scored higher on both complete and partial mastery of the observation items "gives notice when they need to go to the loo" (L2.2.), "participates in circle times/activities" (L2.3), "can cope with going from one activity to another" (L3.1) and "has self-knowledge" (L3.2). The children's level of language comprehension is crucial to mastering these everyday activities. Zambrana et al. (2012) demonstrated that girls between the ages of 1 year 6 months and 3 years have a significantly higher level of language comprehension than do boys. Another longitudinal study of newborn children showed that girls respond better to verbal stimuli and have better eye contact than boys (Friederici et al. 2008; Leeb and Rejskind 2004; Olafsen et al. 2006). Eidevald (2009) found that girls attending kindergarten are more linguistically developed than boys. In the present study, the difference in language comprehension levels may have contributed to girls performing better at expressing their own needs and desires than did boys during interactions with the kindergarten staff. The girls may have appeared to be more independent and have clearer language than the boys. This skill level might, in turn, influence other everyday activities, such as interaction during meals, dressing and undressing, circle time, and going from one activity to another.

The present study found gender differences favouring girls for the observation items "is beginning to take an active part in preparing simple meals" (L1.2), "eats and drinks independently during meals" (L2.1) and "dresses and undresses independently" (L3.3). Although the girls scored higher, the boys were progressing towards mastering these skills.

Activities, such as preparing meals, eating and drinking independently, and dressing and undressing independently, require motor skills. The observation item L3.3 requires a higher degree of motor skills than do items L1.2 and L2.1; the gender effect is most pronounced for this item. Moser and Reikerås (2014) observed that girls in this age group have better motor skills than boys. This finding might indicate that the girls in our study are more capable of mastering everyday activities than boys. The difference in skills may be connected both to motor skills and self-regulation. Meece and Painter (2008) demonstrated that girls make greater use of self-regulation strategies than do boys. Koda et al. (2004) argued that there is a correlation between children who have learned to walk and an increase in appetite and being willing to eat alone. Children aged 1 and 2 years who have learned to walk are more independent during meals than children who have not learned to walk. Koda et al. noted no gender differences in relation to meals; they reported that the teachers contributed to generate differences and that girls are considered to mature earlier and to be more independent, whereas boys receive assistance. Other studies provided similar indications (Campbell and Eaton 1999; Hyde et al. 2008; Rossholt 2012).

Several of the observation items in our study, such as being "cooperative in everyday activities" (L1.1) and "starting to take an active part in preparing simple meals" (L1.2), involved the kindergarten teachers. This aspect was one of the core components of the practical-pedagogical approach in the Norwegian kindergarten system (Jensen 2009; Ministry of Education and Research 2011).

The attitudes, expectations and participation of the staff may have influenced the recording of the observations, which may, in turn, have given the girls an advantage in mastering certain everyday activities. Hyde et al. (2008) claimed that the expectations of parents and teachers create differences between children, which may indicate that gender can be regarded as a social construction based on social and cultural expectations (Walsh 2014). Boys and girls in kindergartens and schools are perceived on the basis of their gender, whereas the teachers' attitudes towards gender influence their interactions with the children (see Borg et al. 2008; Eidevald 2009; Jonsdottir 2007; Kvello 2006; Månsson 2000; Rossholt 2012; Warrington and Younger 2006). Girls' behaviours and habits correspond,

in large part, to the preferred ideals of teachers, such as assuming responsibility and being cooperative, hard-working, diligent and well-behaved (Eidevald 2009; Warrington and Younger 2006).

Our study revealed gender differences in skills pertaining to everyday activities. The observation scheme "Alle Med" was not designed to explain gender differences. However, the results offered useful insights into differences in skills mastery between girls and boys, as well as variance in the mastery of skills, ranging across complete mastery, partial mastery, and no mastery. These findings are useful for kindergarten teachers and staff. Active participation and support are, according to Vygotsky and Cole (1978), crucial for children's mastery of skills, learning and development.

Limitations

This study has several limitations. The observation material "Alle Med" has been developed to observe children in their daily activities in kindergarten; it is not designed for testing. The limitation on the validity of this study may be that quantitative observations are not formal teacher-controlled. However, our method is consistent with the Norwegian kindergartens tradition, which is characterised by a social-pedagogical tradition (Jensen 2009). This tradition involves play and everyday activities of children that are considered to be more important than formal teacher-controlled activities (Ministry of Education and Research 2011; Taguma et al. 2006). Another limitation is whether the observation material is sufficiently suitable for describing how girls and boys cope with everyday activities. Are the selected observation items relevant for the boys, or have they been influenced by the adults' preconceptions and attitudes towards how girls and boys should be? A further limitation of this study is that female kindergarten teachers and female researchers developed our observation material. In Norwegian kindergartens, female teachers comprise approximately 93 % of the staff (Statistics Norway 2014). These factors may have influenced both the design of the observation scheme and the actual observations of toddlers.

Conclusion

There is little empirical, generalisable research on kindergartens in general and on toddlers in particular (Bakken 2008; Borg et al. 2008). The aim of this article was to increase empirical knowledge concerning what types of everyday activities girls and boys between 30 and 33 months of age are able to cope with, as observed by the kindergarten staff. According to the Kindergarten Act (Lovdata 2010), all children have the right to participate in everyday activities, and this also applies to the youngest children.

Our findings show that girls scored higher on complete mastery of the observations items. The girls' higher mastery scores may be connected with the fact that the children are socialised into traditional gender patterns (Månsson 2000; Rossholt 2012; Schum et al. 2001). However, we cannot exclude the likelihood of biological differences between the genders (Hessen 2005; Schum et al. 2001).

This study may therefore contribute to developing knowledge about gender differences between toddlers in kindergartens. Our study indicated that there is a need for additional research in this area.

Conflict of interest The authors have no conflicts of interest to declare.

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